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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/036,380	01/07/2002	Lars Persson	003300-886	2130

7590 04/28/2004

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EXAMINER

HEITBRINK, TIMOTHY W

ART UNIT	PAPER NUMBER
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1722

DATE MAILED: 04/28/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/036,380

Applicant(s)

PERSSON, LARS

Examiner

Tim Heitbrink

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 19 February 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
- 1) ☒ Certified copies of the priority documents have been received.
  - 2) ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1,2,4-9,11,13,15,17 and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shida et al. (Pub. No.: US 2001/0026817) in view of Nakashima et al. (US Patent 5,207,266).

Shida et al. disclose an injection mold for producing three-dimensional components characterized by a system for mold tempering having at least one cooling groove located in a second module 111 where each groove is covered by a first module 102. The second module, forming part of a mold cavity, is fed by a hot runner 1. However, Shida et al. does not disclose the cooling grooves increasing and decreasing the rate of heat transfer from the mould at different positions along the length of the groove.

Nakashima et al. teach a mold having cooling grooves 2 in the same field of endeavor as shown in Fig. 1 which increase and decrease the rate of heat transfer from the mould at different positions along the length of the grooves due to their relative size along their lengths, i.e. more surface area equals more cooling.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the size of the cooling grooves of Shida et al. in order to increase and decrease the rate of heat transfer from the mould at different positions along the length of the grooves as suggested Nakashima.

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Claims 3,10,12,14,16,18 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shida et al. in view of Nakashima et al. as applied to claims 1,2,4-9,11,13,15,17 and 19 above, and further in view of Takahashi.

While Shida et al. (as modified by Nakashima et al.) does not teach seals arranged between the two modules, Takahashi teaches seals 18-21 positioned between modules 1,9,10,17 in order to prevent leakage of cooling water from the cooling grooves. See Fig. 4.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to provide seals between the modules of Shida et al. in order to prevent leakage of cooling water from the cooling grooves as suggested Takahashi.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tim Heitbrink whose telephone number is 571-272-1132. The examiner can normally be reached on Tuesday-Friday 5:30-4:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wanda Walker can be reached on 571-272-1151. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Tim Heitbrink  
Primary Examiner  
Art Unit 1722

4-22-04

twH